

# PATENT COOPERATION TREATY

PCT

## NOTIFICATION OF ELECTION

(PCT Rule 61.2)

From the INTERNATIONAL BUREAU

To:

Assistant Commissioner for Patents  
United States Patent and Trademark  
Office  
Box PCT  
Washington, D.C. 20231  
ÉTATS-UNIS D'AMÉRIQUE

in its capacity as elected Office

Date of mailing (day/month/year)

10 February 2000 (10.02.00)

International application No.

PCT/AU99/00580

Applicant's or agent's file reference

TPG:AS:FP11227

International filing date (day/month/year)

19 July 1999 (19.07.99)

Priority date (day/month/year)

17 July 1998 (17.07.98)

Applicant

WEISS, Anthony, Steven

1. The designated Office is hereby notified of its election made:



in the demand filed with the International Preliminary Examining Authority on:

13 January 2000 (13.01.00)



in a notice effecting later election filed with the International Bureau on:

2. The election ☒ was



was not

made before the expiration of 19 months from the priority date or, where Rule 32 applies, within the time limit under Rule 32.2(b).

The International Bureau of WIPO  
34, chemin des Colombettes  
1211 Geneva 20, Switzerland

Facsimile No.: (41-22) 740.14.35

Authorized officer

Olivia RANAIVOJAONA

Telephone No.: (41-22) 338.83.38

<b>(51) International Patent Classification <sup>6</sup> :</b> <b>C07K 7/04, 7/02, 14/78, C12N 15/12, A61K 38/39, C07H 21/04, C12P 21/02, C12N 5/10</b>		<b>A1</b>	<b>(11) International Publication Number:</b> <b>WO 00/04043</b> <b>(43) International Publication Date:</b> 27 January 2000 (27.01.00)
<b>(21) International Application Number:</b> PCT/AU99/00580 <b>(22) International Filing Date:</b> 19 July 1999 (19.07.99) <b>(30) Priority Data:</b> PP 4723 17 July 1998 (17.07.98) AU <b>(71) Applicant (for all designated States except US):</b> THE UNIVERSITY OF SYDNEY [AU/AU]; Parramatta Road, Sydney, NSW 2006 (AU). <b>(72) Inventor; and</b> <b>(75) Inventor/Applicant (for US only):</b> WEISS, Anthony, Steven [AU/AU]; 235 Rainbow Street, Randwick, NSW 2031 (AU). <b>(74) Agent:</b> GRIFFITH, Hack; G.P.O. Box 4164, Sydney, NSW 2001 (AU).		<b>(81) Designated States:</b> AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZA, ZW, ARIPO patent (GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).  <b>Published</b> <i>With international search report.</i>	
<b>(54) Title:</b> PROTEASE SUSCEPTIBILITY II <b>(57) Abstract</b> <p>The present invention relates to: manipulation of the amino acid sequence of tropoelastin, particularly human tropoelastin, to modify its protease susceptibility; to tropoelastin derivatives having modified protease susceptibility; to peptidomimetic molecules which contain amino acid sequences which correspond to or incorporate the protease susceptible sequences of tropoelastin; and to uses of the tropoelastin derivatives and peptidomimetic molecules. The invention also relates to nucleic acid molecules and genetic constructs encoding the amino acid sequences of the derivatives and peptidomimetic molecules of the invention.</p>			

Express Mail No. EK992703325US

Express Mail No. EK992703325US

# INTERNATIONAL SEARCH REPORT

International application No.

PCT/AU99/00580

<b>A. CLASSIFICATION OF SUBJECT MATTER</b>																						
Int Cl <sup>6</sup> : C07K 7/04, C07K 7/02, C07K 14/78, C12N 15/12, A61K 38/39, C07H 21/04, C12P 21/02, C12N 5/10																						
According to International Patent Classification (IPC) or to both national classification and IPC																						
<b>B. FIELDS SEARCHED</b>																						
Minimum documentation searched (classification system followed by classification symbols)																						
Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched																						
Electronic data base consulted during the international search (name of data base and, where practicable, search terms used) STN } MEDLINE } TROPOELASTIN, MUTAT, SUBSTIT, VARIANT and sequences WPIDS }																						
<b>C. DOCUMENTS CONSIDERED TO BE RELEVANT</b>																						
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.																				
<u>P,X</u> P,A	AU-83252/98-A (THE UNIVERSITY OF SYDNEY) Sequences 7, 9, 12, 13 (28 January 1999)	<u>23, 26, 29, 57, 58,</u> 64-68, 77																				
A	Martin, S.L. et al. "Total synthesis and expression in Eschiria coli of a gene encoding human tropoelastin" GENE, 154(1995) 159-166	1-86																				
<input type="checkbox"/> Further documents are listed in the continuation of Box C <input checked="" type="checkbox"/> See patent family annex																						
<p>* Special categories of cited documents:</p> <table border="0"> <tr> <td>"A"</td> <td>Document defining the general state of the art which is not considered to be of particular relevance</td> <td>"T"</td> <td>later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention</td> </tr> <tr> <td>"E"</td> <td>earlier application or patent but published on or after the international filing date</td> <td>"X"</td> <td>document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone</td> </tr> <tr> <td>"L"</td> <td>document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)</td> <td>"Y"</td> <td>document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art</td> </tr> <tr> <td>"O"</td> <td>document referring to an oral disclosure, use, exhibition or other means</td> <td>"&amp;"</td> <td>document member of the same patent family</td> </tr> <tr> <td>"P"</td> <td>document published prior to the international filing date but later than the priority date claimed</td> <td></td> <td></td> </tr> </table>			"A"	Document defining the general state of the art which is not considered to be of particular relevance	"T"	later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention	"E"	earlier application or patent but published on or after the international filing date	"X"	document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone	"L"	document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	"Y"	document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art	"O"	document referring to an oral disclosure, use, exhibition or other means	"&"	document member of the same patent family	"P"	document published prior to the international filing date but later than the priority date claimed		
"A"	Document defining the general state of the art which is not considered to be of particular relevance	"T"	later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention																			
"E"	earlier application or patent but published on or after the international filing date	"X"	document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone																			
"L"	document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	"Y"	document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art																			
"O"	document referring to an oral disclosure, use, exhibition or other means	"&"	document member of the same patent family																			
"P"	document published prior to the international filing date but later than the priority date claimed																					
Date of the actual completion of the international search 08 September 1999		Date of mailing of the international search report 16 SEP 1999																				
Name and mailing address of the ISA/AU AUSTRALIAN PATENT OFFICE PO BOX 200 WODEN ACT 2606 AUSTRALIA Facsimile No.: (02) 6285 3929		Authorized officer  KEN ENGLAND Telephone No.: (02) 6283 2292																				

### Information on patent family members

International application No.  
**PCT/AU99/00580**

This Annex lists the known "A" publication level patent family members relating to the patent documents cited in the above-mentioned international search report. The Australian Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

Patent Document Cited in Search Report		Patent Family Member	
AU	83252/98	WO	99/03886

The demand must be filed directly with the competent International Preliminary Examining Authority or, if two or more Authorities are competent, with the one chosen by the applicant. The full name or two-letter code of that Authority may be indicated by the applicant on the line below:

IPEA/

# PCT

## CHAPTER II

### DEMAND

under Article 31 of the Patent Cooperation Treaty:  
The undersigned requests that the international application specified below be the subject of international preliminary examination according to the Patent Cooperation Treaty and hereby elects all eligible States (except where otherwise indicated).

For International Preliminary Examining Authority use only		
Identification of IPEA		Date of receipt of DEMAND
<b>Box No. I IDENTIFICATION OF THE INTERNATIONAL APPLICATION</b>		Applicant's or agent's file reference TPG:FP11227
International application No. PCT/AU99/00580	International filing date (day/month/year) 19 July 1999 (19.07.99)	(Earliest) Priority date (day/month/year) 17 July 1998 (17.07.98)
Title of invention Protease Susceptibility II		
<b>Box No. II APPLICANT(S)</b>		
Name and address: (Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country.)  The University of Sydney Parramatta Road Sydney New South Wales 2006 AUSTRALIA		Telephone No.:  Facsimile No.:  Teleprinter No.:
State (that is, country) of nationality: AUSTRALIA	State (that is, country) of residence: AUSTRALIA	
Name and address: (Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country.)  WEISS, Anthony Steven 235 Rainbow Street RANDWICK NEW SOUTH WALES 2031 AUSTRALIA		
State (that is, country) of nationality: AUSTRALIA	State (that is, country) of residence: AUSTRALIA	
Name and address: (Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country.)		
State (that is, country) of nationality:	State (that is, country) of residence:	
<input type="checkbox"/> Further applicants are indicated on a continuation sheet.		

Form PCT/IPEA/401 (first sheet) (July 1998; reprint July 1999)

See Notes to the demand form

**Box No. III AGENT OR COMMON REPRESENTATIVE; OR ADDRESS FOR CORRESPONDENCE**

The following person is ☒ agent ☐ common representative

and ☒ has been appointed earlier and represents the applicant(s) also for international preliminary examination.

☐ is hereby appointed and any earlier appointment of (an) agent(s)/common representative is hereby revoked.

☐ is hereby appointed, specifically for the procedure before the International Preliminary Examining Authority, in addition to the agent(s)/common representative appointed earlier.

Name and address: *(Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country.)*

Griffith Hack  
GPO Box 4164  
Sydney NSW 2001  
AUSTRALIA

Telephone No.:

61 2 9957 5944

Facsimile No.:

61 2 9957 6288

Teleprinter No.:

☐ Address for correspondence: Mark this check-box where no agent or common representative is/has been appointed and the space above is used instead to indicate a special address to which correspondence should be sent.

**Box No. IV BASIS FOR INTERNATIONAL PRELIMINARY EXAMINATION**

Statement concerning amendments: \*

1. The applicant wishes the international preliminary examination to start on the basis of:

☒ the international application as originally filed

the description ☒ as originally filed

☐ as amended under Article 34

the claims ☒ as originally filed

☐ as amended under Article 19 (together with any accompanying statement)

☐ as amended under Article 34

the drawings ☐ as originally filed

☐ as amended under Article 34

2. ☐ The applicant wishes any amendment to the claims under Article 19 to be considered as reversed.

3. ☐ The applicant wishes the start of the international preliminary examination to be postponed until the expiration of 20 months from the priority date unless the International Preliminary Examining Authority receives a copy of any amendments made under Article 19 or a notice from the applicant that he does not wish to make such amendments (Rule 69.1(d)). *(This check-box may be marked only where the time limit under Article 19 has not yet expired.)*

\* Where no check-box is marked, international preliminary examination will start on the basis of the international application as originally filed or, where a copy of amendments to the claims under Article 19 and/or amendments of the international application under Article 34 are received by the International Preliminary Examining Authority before it has begun to draw up a written opinion or the international preliminary examination report, as so amended.

Language for the purposes of international preliminary examination: English

☒ which is the language in which the international application was filed.

☐ which is the language of a translation furnished for the purposes of international search.

☐ which is the language of publication of the international application.

☐ which is the language of the translation (to be) furnished for the purposes of international preliminary examination.

**Box No. V ELECTION OF STATES**

The applicant hereby elects all eligible States *(that is, all States which have been designated and which are bound by Chapter II of the PCT)*

excluding the following States which the applicant wishes not to elect:

**Box No. VI CHECK LIST**

The demand is accompanied by the following elements, in the language referred to in Box No. IV, for the purposes of international preliminary examination:

- |  |   |        |
|--|---|--------|
| 1. translation of international application                              | : | sheets |
| 2. amendments under Article 34   | : | sheets |
| 3. copy (or, where required, translation) of amendments under Article 19 | : | sheets |
| 4. copy (or, where required, translation) of statement under Article 19  | : | sheets |
| 5. letter  | : | sheets |
| 6. other (specify)   | : | sheets |

For International Preliminary  
Examining Authority use only

received not received

<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>

The demand is also accompanied by the item(s) marked below:

- |  |   |
|--|---|
| 1. <input checked="" type="checkbox"/> fee calculation sheet                             | 4. <input type="checkbox"/> statement explaining lack of signature                                  |
| 2. <input type="checkbox"/> separate signed power of attorney                            | 5. <input type="checkbox"/> nucleotide and/or amino acid sequence listing in computer readable form |
| 3. <input type="checkbox"/> copy of general power of attorney; reference number, if any: | 6. <input type="checkbox"/> other (specify):  |

**Box No. VII SIGNATURE OF APPLICANT, AGENT OR COMMON REPRESENTATIVE**

Next to each signature, indicate the name of the person signing and the capacity in which the person signs (if such capacity is not obvious from reading the demand).

*R. Walton*

Raymond Walton  
Registered Patent Attorney  
for and on behalf of  
GRIFFITH HACK

For International Preliminary Examining Authority use only

1. Date of actual receipt of DEMAND:

2. Adjusted date of receipt of demand due to CORRECTIONS under Rule 60.1(b):

- |  |   |
|--|---|
| 3. <input type="checkbox"/> The date of receipt of the demand is AFTER the expiration of 19 months from the priority date and item 4 or 5, below, does not apply.                        | <input type="checkbox"/> The applicant has been informed accordingly. |
| 4. <input type="checkbox"/> The date of receipt of the demand is WITHIN the period of 19 months from the priority date as extended by virtue of Rule 80.5.                               |   |
| 5. <input type="checkbox"/> Although the date of receipt of the demand is after the expiration of 19 months from the priority date, the delay in arrival is EXCUSED pursuant to Rule 82. |   |


For International Bureau use only

Demand received from IPEA on:

PATENT COOPERATION TREATY  
**PCT**  
INTERNATIONAL PRELIMINARY EXAMINATION REPORT  
(PCT Article 36 and Rule 70)

Applicant's or agent's file reference TPG:MS:FP11227	<b>FOR FURTHER ACTION</b>	See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416).
International application No. PCT/AU99/00580	International filing date (day/month/year) 19 July 1999	Priority Date (day/month/year) 17 July 1998
International Patent Classification (IPC) or national classification and IPC Int. Cl. <sup>7</sup> C07K 7/04, 7/02, 14/78; C12N 15/12, 5/10; C07H 21/04; C12P 21/02; A61K 38/39		
Applicant THE UNIVERSITY OF SYDNEY; WEISS, Anthony Steven et al		

1.	This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.
2.	This REPORT consists of a total of 4 sheets, including this cover sheet. <input checked="" type="checkbox"/> This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).  These annexes consist of a total of 4 sheet(s).
3.	This report contains indications relating to the following items:  I <input checked="" type="checkbox"/> Basis of the report II <input type="checkbox"/> Priority III <input type="checkbox"/> Non-establishment of opinion with regard to novelty, inventive step and industrial applicability IV <input type="checkbox"/> Lack of unity of invention V <input checked="" type="checkbox"/> Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement VI <input checked="" type="checkbox"/> Certain documents cited VII <input type="checkbox"/> Certain defects in the international application VIII <input type="checkbox"/> Certain observations on the international application

Date of submission of the demand 13 January 2000	Date of completion of the report 11 October 2000
Name and mailing address of the IPEA/AU AUSTRALIAN PATENT OFFICE PO BOX 200, WODEN ACT 2606, AUSTRALIA E-mail address: pct@ipaustalia.gov.au Facsimile No. (02) 6285 3929	Authorized Officer  K. G. England Telephone No. (02) 6283 2292

Form PCT/IPEA/409 (Cover sheet) (July 1998)



**I. Basis of the report****1. With regard to the elements of the international application:\***

- ☐ the international application as originally filed.
- ☒ the description, pages 1 to 98, as originally filed,  
pages , filed with the demand,  
pages , received on with the letter of
- ☒ the claims, pages , as originally filed,  
pages , as amended (together with any statement) under Article 19,  
pages , filed with the demand,  
pages 108 to 111 received on 24 July 2000 with the letter of 14 July 2000
- ☒ the drawings, pages 1/26 to 26/26, as originally filed,  
pages , filed with the demand,  
pages , received on with the letter of
- ☒ the sequence listing part of the description:  
pages 67 to 98 , as originally filed  
pages , filed with the demand  
pages , received on with the letter of

**2. With regard to the language, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.**

These elements were available or furnished to this Authority in the following language which is:

- ☐ the language of a translation furnished for the purposes of international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of the translation furnished for the purposes of international preliminary examination (under Rules 55.2 and/or 55.3).

**3. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, was on the basis of the sequence listing:**

- ☐ contained in the international application in written form.
- ☒ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished

**4. ☐ The amendments have resulted in the cancellation of:**

- ☐ the description, pages
- ☐ the claims, Nos.
- ☐ the drawings, sheets/fig.

**5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).\*\***

\* Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17).

\*\* Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report

**V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement****1. Statement**

Novelty (N)	Claims 1 to 44	YES
	Claims	NO
Inventive step (IS)	Claims 1 to 44	YES
	Claims	NO
Industrial applicability (IA)	Claims 1 to 44	YES
	Claims	NO

**2. Citations and explanations (Rule 70.7)**

Martin, S. L. et al. "total synthesis and expression in escherichia coli of a gene encoding human tropoelastin" GENE, 154 (1995) pages 159-166.

This document forms part of the background art and does not attack the novelty or inventive step of these claims.

## VI. Certain documents cited

## 1. Certain published documents (Rule 70.10)

Application No. Patent No.	Publication date (day/month/year)	Filing date (day/month/year)	Priority date ( valid claim) (day/month/year)
AU-83252/98	10 February 1999	17 July 1998	18 July 1997

AU-\*3252/98-A discloses tropoelastin and tropoelastin derivative amino acid sequences.

## 2. Non-written disclosures (Rule 70.9)

Kind of non-written disclosure	Date of non-written disclosure (day/month/year)	Date of written disclosure referring to non-written disclosure (day/month/year)
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Claims:

1. A method for reducing or eliminating the susceptibility of a tropoelastin to proteolysis comprising mutating a sub-sequence in the tropoelastin so that the susceptibility of the tropoelastin to proteolysis is reduced or eliminated.
2. A method according to claim 1 wherein one sub-sequence is mutated.
3. A method according to claim 1 wherein one amino acid residue in the sub-sequence is mutated.
4. A method according to claim 1 wherein the sub-sequence is capable of being digested by a serine protease.
5. A method according to claim 4 wherein the sub-sequence has an amino acid sequence including the sequence: RAAAG.
6. A method according to claim 5 wherein the sub-sequence is mutated by replacing arginine in the sequence: RAAAG with alanine.
7. A method according to claim 4 wherein the sub-sequence has an amino acid sequence selected from the group of sequences shown in SEQ ID NOS: 17 to 44.
8. A method according to claim 7 wherein the sub-sequence is mutated by replacing arginine in the sequence selected from the group of sequences shown in SEQ ID NOS: 17 to 44 with alanine.
9. A method according to claim 4 wherein the sub-sequence is capable of being digested by thrombin and has an amino acid sequence shown in SEQ ID NOS: 8 or 9.
10. A method according to claim 4 wherein the sub-sequence is capable of being digested by plasmin and has an amino acid sequence shown in SEQ ID NOS: 11 or 12.
11. A method according to claim 4 wherein the sub-sequence is capable of being digested by kallikrein.
12. A method according to claim 11 wherein the sub-sequence has an amino acid sequence shown in SEQ ID NOS: 9 or 10.

AMENDED SHEET  
IPEA/AU

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13. A method according to claim 1 wherein the sub-  
sequence is capable of being digested by a  
metalloproteinase.

14. A method according to claim 13 wherein the sub-  
5 sequence has an amino acid sequence including the sequence:  
ALAAA.

15. A method according to claim 14 wherein the sub-  
sequence is mutated by replacing alanine at any position in  
the sequence: ALAAA with another amino acid residue.

10 16. A method according to claim 15 wherein the sub-  
sequence is mutated by replacing the alanine which is N-  
terminal to leucine in the sequence: ALAAA with another  
amino acid.

17. A method according to claim 13 wherein the sub-  
15 sequence has an amino acid sequence selected from the group  
of sequences shown in SEQ ID NOS: 45 to 70.

18. A method according to claim 17 wherein the sub-  
sequence is mutated by replacing alanine at any position in  
the sequence selected from the group of sequences shown in  
20 SEQ ID NOS: 45 to 70 with another amino acid residue.

19. A method according to claim 18 wherein the alanine  
that is replaced is N-terminal to leucine.

20. A method according to claim 13 wherein the sub-  
sequence is capable of being digested by gelatinase A or B.

25 21. A method according to claim 20 wherein the sub-  
sequence has an amino acid sequence shown in SEQ ID NO: 13.

22. A method according to any one of claims 1 to 21  
wherein the tropoelastin is human tropoelastin.

23. A method for enhancing the susceptibility of a  
30 tropoelastin to proteolysis comprising inserting a sub-  
sequence into the tropoelastin so that the susceptibility  
of the tropoelastin to proteolysis is enhanced.

24. A method according to claim 23 wherein one sub-  
sequence is inserted.

35 25. A method according to claim 23 wherein the  
inserted sub-sequence is capable of being digested with a

AMENDED SHEET  
IPEA/II

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serine protease.

26. A method according to claim 25 wherein the inserted sub-sequence has an amino acid sequence including the sequence: RAAAG.

5 27. A method according to claim 25 wherein the inserted sub-sequence has an amino acid sequence selected from the group of sequences shown in SEQ ID NOS: 17 to 44.

28. A method according to claim 25 wherein the inserted sub-sequence is capable of being digested by  
10 thrombin and has an amino acid sequence shown in SEQ ID NOS: 8 or 9.

29. A method according to claim 25 wherein the inserted sub-sequence is capable of being digested by plasmin and has an amino acid sequence shown in SEQ ID NOS:  
15 11 or 12.

30. A method according to claim 25 wherein the inserted sub-sequence is capable of being digested by kallikrein.

31. A method according to claim 30 wherein the  
20 inserted sub-sequence has an amino acid sequence shown in SEQ ID NOS: 9 or 10.

32. A method according to claim 23 wherein the inserted sub-sequence is capable of being digested by a metalloproteinase.

25 33. A method according to claim 32 wherein the inserted sub-sequence has an amino acid sequence including the sequence: ALAAA.

34. A method according to claim 32 wherein the inserted sub-sequence has an amino acid sequence selected  
30 from the group of sequences shown in SEQ ID NOS: 45 to 70.

35. A method according to claim 32 wherein the inserted sub-sequence is capable of being digested by gelatinase A or B.

36. A method according to claim 35 wherein the  
35 inserted sub-sequence has the amino acid sequence shown in SEQ ID NO: 13.

AMENDED SHEET  
IPEA/AU

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37. A method according to any one of claims 23 to 36 wherein the tropoelastin is human tropoelastin.

38. A peptidomimetic molecule comprising all or part of a peptide selected from the group consisting of

5 KAPGVGGAF, RAAAGLG, RSLSPELREGD, KAAQFGLVPGV, KSAAKVAAKAQLRAA, RSLSPELRE and LAAAKAAKYGAA.

39. A peptidomimetic molecule which has the sequence: H-Ala-Ala-Lys-Ala-Gln-Leu-Arg-Ala-Ala-Ala-Gly-Leu-Gly-Ala-OH or H-Ala-Ala-Lys-Ala-Gln-Leu-Arg-R-Ala-Ala-Ala-Gly-Leu-Gly-Ala-OH (where R = a reduced peptide bond).

40. A peptidomimetic molecule which is a retro-inverso pseudo peptide which has the sequence: H-D-Ala-Gly-D-Leu-Gly-D-Ala-D-Ala-D-Ala-(R)-D-Arg-D-Leu-D-Gln-D-Ala-D-Lys-D-Ala-D-Ala-OH (where R = a reduced peptide bond) or H-D-Ala-Gly-D-Leu-Gly-D-Ala-D-Ala-D-Ala-D-Arg-D-Leu-D-Gln-D-Ala-D-Lys-D-Ala-D-Ala-OH.

41. A peptidomimetic molecule which has the sequence H-Val-Pro-Gly-Ala-Leu-Ala-Ala-Ala-OH or H-Val-Pro-Gly-Ala-(R)-Leu-Ala-Ala-Ala-OH (where R = a reduced peptide bond)

42. A peptidomimetic molecule which is a retro-inverso pseudo peptide which has the sequence: H-D-Ala-D-Ala-D-Ala-D-Leu-(R)-D-Ala-Gly-D-Pro-D-Val-OH (where R = a reduced peptide bond) or H-D-Ala-D-Ala-D-Ala-D-Leu-D-Ala-Gly-D-Pro-D-Val-OH.

43. A method for enhancing the purification of a tropoelastin comprising including a peptidomimetic molecule according to any one of claims 38 to 42 in a crude tropoelastin preparation which is being subjected to purification.

44. A pharmaceutical composition comprising a peptidomimetic molecule according to any one of claims 38 to 42 and a pharmaceutically acceptable carrier.

AMENDED SHEET  
IFEA/AU

# PATENT COOPERATION TREATY

From the:  
INTERNATIONAL PRELIMINARY EXAMINING AUTHORITY

To:

Griffith Hack  
GPO Box 4164  
SYDNEY NSW 2001

## PCT

### WRITTEN OPINION

(PCT Rule 66)

Applicant's or agent's file reference TPG:JL:FP11227		Date of mailing (day/month/year) 24 FEBRUARY 2000	
		REPLY DUE within two months from the above date of mailing	
International application No. PCT/AU 99/00580	International filing date (day/month/year) 19 July 1999	Priority Date (day/month/year) 17 July 1998	
International Patent Classification (IPC) or both national classification and IPC Int. CL <sup>7</sup> C07K 7/04, 7/02, 14/78; C12N 15/12, 5/10; C07H 21/04; C12P 21/02; A61K 38/39			
Applicant  THE UNIVERSITY OF SYDNEY et al			

1. This written opinion is the first drawn by this International Preliminary Examining Authority.
2. This opinion contains indications relating to the following items:
 

I	<input checked="" type="checkbox"/>	Basis of the opinion
II	<input type="checkbox"/>	Priority
III	<input type="checkbox"/>	Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
IV	<input type="checkbox"/>	Lack of unity of invention
V	<input checked="" type="checkbox"/>	Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
VI	<input checked="" type="checkbox"/>	Certain documents cited
VII	<input type="checkbox"/>	Certain defects in the international application
VIII	<input checked="" type="checkbox"/>	Certain observations on the international application
3. The applicant is hereby invited to reply to this opinion.
 

**When?** See the time limit indicated above. The applicant may, before the expiration of that time limit, request this Authority to grant an extension, see Rule 66.2(d).

**How?** By submitting a written reply, accompanied, where appropriate, by amendments, according to Rule 66.3. For the form and the language of the amendments, see Rules 66.8 and 66.9.

**Also** For an additional opportunity to submit amendments, see Rule 66.4.  
For the examiner's obligation to consider amendments and/or arguments, see Rule 66.4bis.  
For an informal communication with the examiner, see Rule 66.6.

If no reply is filed, the international preliminary examination report will be established on the basis of this opinion.
4. The final date by which the international preliminary examination report must be established according to Rule 69.2 is: 17 November 2000

Name and mailing address of the IPEA/AU AUSTRALIAN PATENT OFFICE PO BOX 200, WODEN ACT 2606, AUSTRALIA E-mail address: pct@ipaustalia.gov.au Facsimile No. (02) 6285 3929	Authorized Officer  K. G. ENGLAND Telephone No. (02) 6283
---	--

Form PCT/IPEA/408 (Cover sheet) (July 1998)



**I Basis of the opinion****1. With regard to the elements of the international application:\***

- ☒ the international application as originally filed.
- ☐ the description,      pages , as originally filed,  
   pages , filed with the demand,  
   pages , filed with the letter of .
- ☐ the claims,      pages , as originally filed,  
   pages , as amended under Article 19,  
   pages , filed with the demand,  
   pages , filed with the letter of .
- ☐ the drawings,      pages , as originally filed,  
   pages , filed with the demand,  
   pages , filed with the letter of .
- ☐ the sequence listing part of the description:  
   pages , as originally filed  
   pages , filed with the demand  
   pages , filed with the letter of .

**2. With regard to the language, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.**

These elements were available or furnished to this Authority in the following language which is:

- ☐ the language of a translation furnished for the purposes of international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of the translation furnished for the purposes of international preliminary examination (under Rules 55.2 and/or 55.3).

**3. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the written opinion was drawn on the basis of the sequence listing:**

- ☐ contained in the international application in printed form.
- ☒ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

**4. ☐ The amendments have resulted in the cancellation of:**

- ☐ the description,      pages
- ☐ the claims,      Nos.
- ☐ the drawings,      sheets/fig.

**5. ☐ This opinion has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).**

\* Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this opinion as "originally filed"

**V. Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement****1. Statement**

Novelty (N)	Claims 1-86	YES
	Claims - nil	NO
Inventive step (IS)	Claims 1-86	YES
	Claims - nil	NO
Industrial applicability (IA)	Claims 1-86	YES
	Claims - nil	NO

**2. Citations and explanations**

Martin, S.L. et al. "Total synthesis and expression in escherichia coli of a gene encoding human tropoelastin." GENE, 154 (1995) pages 159-166.

This document forms part of the background art.

VI Certain documents cited			
1. Certain published documents (Rule 70.10)			
Application No. Patent No.	Publication date (day/month/year)	Filing date (day/month/year)	Priority date ( valid claim) (day/month/year)
AU-83252/98	10 February 1999	17 July 1998	18 July 1997
<p>AU-83252/98-A discloses tropoelastin and tropoelastin derivative amino acid sequences.</p> <p>Note that claims 23, 57 and 73 have been interpreted to include amino acid sequences based on tropoelastin and its derivatives and not all the possible sequences defined by some of the appended claims.</p>			
2. Non-written disclosures (Rule 70.9)			
Kind of non-written disclosure	Date of non-written disclosure (day/month/year)	Date of written disclosure referring to non-written disclosure (day/month/year)	

**VIII. Certain observations on the international application**

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:

Several of the claims of the present application are so drafted that it is doubtful whether they are fully supported by the description. Including only the coded amino acids, claims 29, 30 and 32 define any one of five peptides, three of nine amino acids, one of eleven and the other of seven, in which any one of the amino acids may be replaced with any amino acid. These claims define between them 855 possible peptides. Claims 28 and 36 define a few thousand each, while claim 37 defines over 700. Claim 39 defines at least 247 peptides, perhaps 19<sup>13</sup> if "at least one amino acid" is read as a "between one and all amino acids". Claim 40 defines 19 peptides. It is doubtful whether all of these potential peptides would be active in the method of the invention.

Claim 37 is not clear because some of the peptides of sequences 45 to 70 do not contain a leucine residue, and one contains two alanine residues N-terminal to a leucine residue.

# PCT

## REQUEST

The undersigned requests that the present international application be processed according to the Patent Cooperation Treaty.

Receiving Office use only

International Application No.

International Filing Date

Name of receiving Office and "PCT International Application"

Applicant's or agent's file reference  
(if desired) (12 characters maximum) TPG:AS:FP11227

Box No. I TITLE OF INVENTION

PROTEASE SUSCEPTIBILITY II

Box No. II APPLICANT

Name and address: (Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country. The country of the address indicated in this Box is the applicant's State (that is, country) of residence if no State of residence is indicated below.)

THE UNIVERSITY OF SYDNEY  
Parramatta Road  
SYDNEY NEW SOUTH WALES 2006  
AUSTRALIA

☐ This person is also inventor.

Telephone No.

Facsimile No.

Telexprinter No.

State (that is, country) of nationality:

AUSTRALIA

State (that is, country) of residence:

AUSTRALIA

This person is applicant for the purposes of:

☐ all designated States

☒ all designated States except the United States of America

☐ the United States of America only

☐ the States indicated in the Supplemental Box

Box No. III FURTHER APPLICANT(S) AND/OR (FURTHER) INVENTOR(S)

Name and address: (Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country. The country of the address indicated in this Box is the applicant's State (that is, country) of residence if no State of residence is indicated below.)

WEISS, Anthony Steven  
235 Rainbow Street  
RANDWICK NEW SOUTH WALES 2031  
AUSTRALIA

This person is:

☐ applicant only

☒ applicant and inventor

☐ inventor only (if this check-box is marked, do not fill in below.)

State (that is, country) of nationality:

AUSTRALIA

State (that is, country) of residence:

AUSTRALIA

This person is applicant for the purposes of:

☐ all designated States

☐ all designated States except the United States of America

☒ the United States of America only

☐ the States indicated in the Supplemental Box

☐ Further applicants and/or (further) inventors are indicated on a continuation sheet.

Box No. IV AGENT OR COMMON REPRESENTATIVE; OR ADDRESS FOR CORRESPONDENCE

The person identified below is hereby/has been appointed to act on behalf of the applicant(s) before the competent International Authorities as:

☒ agent

☐ common representative

Name and address: (Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country.)

Griffith Hack  
GPO Box 4164  
Sydney NSW 2001  
AUSTRALIA

Telephone No.

61 2 9957 5944

Facsimile No.

61 2 9957 6288

Telexprinter No.

☐ Address for correspondence: Mark this check-box where no agent or common representative is/has been appointed and the space above is used instead to indicate a special address to which correspondence should be sent.

Form PCT/RO/101 (first sheet) (July 1998; reprint January 1999)

See Notes to the request form

**Box No.V DESIGNATION OF STATES**

The following designations are hereby made under Rule 4.9(a) (mark the applicable check-boxes; at least one must be marked).

**Regional Patent**

- ☒ **AP** ARIPO Patent: GH Ghana, GM Gambia, KE Kenya, LS Lesotho, MW Malawi, SD Sudan, SL Sierra Leone, SZ Swaziland, UG Uganda, ZW Zimbabwe, and any other State which is a Contracting State of the Harare Protocol and of the PCT
- ☒ **EA** Eurasian Patent: AM Armenia, AZ Azerbaijan, BY Belarus, KG Kyrgyzstan, KZ Kazakhstan, MD Republic of Moldova, RU Russian Federation, TJ Tajikistan, TM Turkmenistan, and any other State which is a Contracting State of the Eurasian Patent Convention and of the PCT
- ☒ **EP** European Patent: AT Austria, BE Belgium, CH and LI Switzerland and Liechtenstein, CY Cyprus, DE Germany, DK Denmark, ES Spain, FI Finland, FR France, GB United Kingdom, GR Greece, IE Ireland, IT Italy, LU Luxembourg, MC Monaco, NL Netherlands, PT Portugal, SE Sweden, and any other State which is a Contracting State of the European Patent Convention and of the PCT
- ☒ **OA** OAPI Patent: BF Burkina Faso, BJ Benin, CF Central African Republic, CG Congo, CI Côte d'Ivoire, CM Cameroon, GA Gabon, GN Guinea, GW Guinea-Bissau, ML Mali, MR Mauritania, NE Niger, SN Senegal, TD Chad, TG Togo, and any other State which is a member State of OAPI and a Contracting State of the PCT (if other kind of protection or treatment desired, specify on dotted line)

**National Patent (if other kind of protection or treatment desired, specify on dotted line).**

- |   |   |
|---|---|
| <input checked="" type="checkbox"/> <b>AE</b> United Arab Emirates                  | <input checked="" type="checkbox"/> <b>LR</b> Liberia                                   |
| <input checked="" type="checkbox"/> <b>AL</b> Albania                               | <input checked="" type="checkbox"/> <b>LS</b> Lesotho                                   |
| <input checked="" type="checkbox"/> <b>AM</b> Armenia                               | <input checked="" type="checkbox"/> <b>LT</b> Lithuania                                 |
| <input checked="" type="checkbox"/> <b>AT</b> Austria                               | <input checked="" type="checkbox"/> <b>LU</b> Luxembourg                                |
| <input checked="" type="checkbox"/> <b>AU</b> Australia                             | <input checked="" type="checkbox"/> <b>LV</b> Latvia                                    |
| <input checked="" type="checkbox"/> <b>AZ</b> Azerbaijan                            | <input checked="" type="checkbox"/> <b>MD</b> Republic of Moldova                       |
| <input checked="" type="checkbox"/> <b>BA</b> Bosnia and Herzegovina                | <input checked="" type="checkbox"/> <b>MG</b> Madagascar                                |
| <input checked="" type="checkbox"/> <b>BB</b> Barbados                              | <input checked="" type="checkbox"/> <b>MK</b> The former Yugoslav Republic of Macedonia |
| <input checked="" type="checkbox"/> <b>BG</b> Bulgaria                              | <input checked="" type="checkbox"/> <b>MN</b> Mongolia                                  |
| <input checked="" type="checkbox"/> <b>BR</b> Brazil                                | <input checked="" type="checkbox"/> <b>MW</b> Malawi                                    |
| <input checked="" type="checkbox"/> <b>BY</b> Belarus                               | <input checked="" type="checkbox"/> <b>MX</b> Mexico                                    |
| <input checked="" type="checkbox"/> <b>CA</b> Canada                                | <input checked="" type="checkbox"/> <b>NO</b> Norway                                    |
| <input checked="" type="checkbox"/> <b>CH and LI</b> Switzerland and Liechtenstein  | <input checked="" type="checkbox"/> <b>NZ</b> New Zealand                               |
| <input checked="" type="checkbox"/> <b>CN</b> China                                 | <input checked="" type="checkbox"/> <b>PL</b> Poland                                    |
| <input checked="" type="checkbox"/> <b>CU</b> Cuba                                  | <input checked="" type="checkbox"/> <b>PT</b> Portugal                                  |
| <input checked="" type="checkbox"/> <b>CZ</b> Czech Republic                        | <input checked="" type="checkbox"/> <b>RO</b> Romania                                   |
| <input checked="" type="checkbox"/> <b>DE</b> Germany                               | <input checked="" type="checkbox"/> <b>RU</b> Russian Federation                        |
| <input checked="" type="checkbox"/> <b>DK</b> Denmark                               | <input checked="" type="checkbox"/> <b>SD</b> Sudan                                     |
| <input checked="" type="checkbox"/> <b>EE</b> Estonia                               | <input checked="" type="checkbox"/> <b>SE</b> Sweden                                    |
| <input checked="" type="checkbox"/> <b>ES</b> Spain                                 | <input checked="" type="checkbox"/> <b>SG</b> Singapore                                 |
| <input checked="" type="checkbox"/> <b>FI</b> Finland                               | <input checked="" type="checkbox"/> <b>SI</b> Slovenia                                  |
| <input checked="" type="checkbox"/> <b>GB</b> United Kingdom                        | <input checked="" type="checkbox"/> <b>SK</b> Slovakia                                  |
| <input checked="" type="checkbox"/> <b>GD</b> Grenada                               | <input checked="" type="checkbox"/> <b>SL</b> Sierra Leone                              |
| <input checked="" type="checkbox"/> <b>GE</b> Georgia                               | <input checked="" type="checkbox"/> <b>TJ</b> Tajikistan                                |
| <input checked="" type="checkbox"/> <b>GH</b> Ghana                                 | <input checked="" type="checkbox"/> <b>TM</b> Turkmenistan                              |
| <input checked="" type="checkbox"/> <b>GM</b> Gambia                                | <input checked="" type="checkbox"/> <b>TR</b> Turkey                                    |
| <input checked="" type="checkbox"/> <b>HR</b> Croatia                               | <input checked="" type="checkbox"/> <b>TT</b> Trinidad and Tobago                       |
| <input checked="" type="checkbox"/> <b>HU</b> Hungary                               | <input checked="" type="checkbox"/> <b>UA</b> Ukraine                                   |
| <input checked="" type="checkbox"/> <b>ID</b> Indonesia                             | <input checked="" type="checkbox"/> <b>UG</b> Uganda                                    |
| <input checked="" type="checkbox"/> <b>IL</b> Israel                                | <input checked="" type="checkbox"/> <b>US</b> United States of America                  |
| <input checked="" type="checkbox"/> <b>IN</b> India                                 | <input checked="" type="checkbox"/> <b>UZ</b> Uzbekistan                                |
| <input checked="" type="checkbox"/> <b>IS</b> Iceland                               | <input checked="" type="checkbox"/> <b>VN</b> Viet Nam                                  |
| <input checked="" type="checkbox"/> <b>JP</b> Japan                                 | <input checked="" type="checkbox"/> <b>YU</b> Yugoslavia                                |
| <input checked="" type="checkbox"/> <b>KE</b> Kenya                                 | <input checked="" type="checkbox"/> <b>ZA</b> South Africa                              |
| <input checked="" type="checkbox"/> <b>KG</b> Kyrgyzstan                            | <input checked="" type="checkbox"/> <b>ZW</b> Zimbabwe                                  |
| <input checked="" type="checkbox"/> <b>KP</b> Democratic People's Republic of Korea |   |
| <input checked="" type="checkbox"/> <b>KR</b> Republic of Korea                     |   |
| <input checked="" type="checkbox"/> <b>KZ</b> Kazakhstan                            |   |
| <input checked="" type="checkbox"/> <b>LC</b> Saint Lucia                           |   |
| <input checked="" type="checkbox"/> <b>LK</b> Sri Lanka                             |   |

Check-boxes reserved for designating States which have become party to the PCT after issuance of this sheet:

- ☐ .....
- ☐ .....

**Precautionary Designation Statement:** In addition to the designations made above, the applicant also makes under Rule 4.9(b) all other designations which would be permitted under the PCT except any designation(s) indicated in the Supplemental Box as being excluded from the scope of this statement. The applicant declares that those additional designations are subject to confirmation and that any designation which is not confirmed before the expiration of 15 months from the priority date is to be regarded as withdrawn by the applicant at the expiration of that time limit. (Confirmation of a designation consists of the filing of a notice specifying that designation and the payment of the designation and confirmation fees. Confirmation must reach the receiving Office within the 15-month time limit.)

Box No. VI PRIORITY CLAIM		<input type="checkbox"/> Further priority claims are indicated in the Supplemental Box.		
Filing date of earlier application (day/month/year)	Number of earlier application	Where earlier application is:		
		national application: country	regional application: regional Office	international application: receiving Office
item (1) 17/07/1998 17 July 1998	PP4723	Australia		Australia
item (2)				
item (3)				

☒ The receiving Office is requested to prepare and transmit to the International Bureau a certified copy of the earlier application(s) (only if the earlier application was filed with the Office which for the purposes of the present international application is the receiving Office) identified above as item(s): (1)

\* Where the earlier application is an ARIPO application, it is mandatory to indicate in the Supplemental Box at least one country party to the Paris Convention for the Protection of Industrial Property for which that earlier application was filed (Rule 4.10(b)(ii)). See Supplemental Box.

Box No. VII INTERNATIONAL SEARCHING AUTHORITY


Choice of International Searching Authority (ISA) (If two or more International Searching Authorities are competent to carry out the international search, indicate the Authority chosen; the two-letter code may be used): ISA /	Request to use results of earlier search; reference to that search (if an earlier search has been carried out by or requested from the International Searching Authority): Date (day/month/year)      Number      Country (or regional Office)
---	---

Box No. VIII CHECK LIST; LANGUAGE OF FILING

<p>This international application contains the following number of sheets:</p> <p>request : 3</p> <p>description (excluding sequence listing part) : 66</p> <p>claims : 9</p> <p>abstract : 1</p> <p>drawings : 26</p> <p>sequence listing part of description : 32</p> <p>Total number of sheets : 137</p>	<p>This international application is accompanied by the item(s) marked below:</p> <p>1. <input checked="" type="checkbox"/> fee calculation sheet</p> <p>2. <input type="checkbox"/> separate signed power of attorney</p> <p>3. <input type="checkbox"/> copy of general power of attorney; reference number, if any:</p> <p>4. <input type="checkbox"/> statement explaining lack of signature</p> <p>5. <input type="checkbox"/> priority document(s) identified in Box No. VI as item(s):</p> <p>6. <input type="checkbox"/> translation of international application into (language):</p> <p>7. <input type="checkbox"/> separate indications concerning deposited microorganism or other biological material</p> <p>8. <input checked="" type="checkbox"/> nucleotide and/or amino acid sequence listing in computer readable form</p> <p>9. <input type="checkbox"/> other (specify):</p>
Figure of the drawings which should accompany the abstract:	Language of filing of the international application: English

Box No. IX SIGNATURE OF APPLICANT OR AGENT

Next to each signature, indicate the name of the person signing and the capacity in which the person signs (if such capacity is not obvious from reading the request).

  
Robert Wulff  
Registered Patent Attorney  
for and on behalf of  
Griffith Hack

For receiving Office use only	
1. Date of actual receipt of the purported international application:	2. Drawings: <input type="checkbox"/> received: <input type="checkbox"/> not received:
3. Corrected date of actual receipt due to later but timely received papers or drawings completing the purported international application:	
4. Date of timely receipt of the required corrections under PCT Article 11(2):	
5. International Searching Authority (if two or more are competent): ISA /	6. <input type="checkbox"/> Transmittal of search copy delayed until search fee is paid.

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Date of receipt of the record copy by the International Bureau:

**FOR THE PURPOSES OF INFORMATION ONLY**

Codes used to identify States party to the PCT on the front pages of pamphlets publishing international applications under the PCT.

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DK	Denmark	LK	Sri Lanka	SE	Sweden		
EE	Estonia	LR	Liberia	SG	Singapore		